
U.S. Department of the Interior • U.S. Geological Survey

MINERAL INDUSTRY SURVEYS

Mark Schaefer, Interim Director

Reston, VA 20192

For information, contact:

Kim B. Shedd, Commodity Specialist

Telephone: (703) 648-4974, Fax: (703) 648-7757

E-mail: kshedd@usgs.gov

JoAnn Sterling (Data), (703) 648-7953

MINES FaxBack: (703) 648-4999

Internet: <http://minerals.er.usgs.gov/minerals>

COBALT IN SEPTEMBER 1997

U.S. consumption of cobalt in January through September 1997 was 11% higher than consumption during the first three quarters of 1996. U.S. imports of cobalt metal and cobalt contained in chemicals during January through August 1997 were 20% higher than imports during the first 8 months of 1996. Exports of unwrought cobalt and cobalt contained in chemicals were 7% lower during January through August 1997 than exports during the same period in 1996. Trade data for September 1997 will be available in a subsequent issue.

Note

With the exception of prices, all data in this report have been rounded to no more than three significant digits. Totals and percentages were calculated by using unrounded data.

Prices of electrolytic cobalt in dollars per pound from Platt's Metals Week are listed below.

<u>Week ending</u>	<u>Price range</u>
October 17	22.60-24.00
October 24	22.60-24.00
October 31	23.50-25.00
November 7	23.50-25.50
November 14	24.75-26.00

Monthly average

October
23.74

TABLE 1
U.S. REPORTED CONSUMPTION OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Metal 2/	Oxide and other chemical compounds 3/	Scrap	Total
1996:				
January-September r/	2,430	1,220	1,140	4,790
January-December 4/	3,240	1,610	1,660	6,500
Year 5/	3,640	1,710	1,670	7,010
1997:				
January	303	140	163	606
February	287	134	165	587
March	274	133	171	578
April	304	132	173	610
May	297	128	174	599
June	270	126	174	570
July	270	127 r/	169 r/	565 r/
August r/	295	125	173	593
September	299	130	170	599
January-September	2,600	1,180	1,530	5,310

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Includes metal powder.

3/ Data may include other cobalt materials.

4/ Data based on monthly reports.

5/ Includes annual reports.

TABLE 2
U.S. REPORTED CONSUMPTION OF COBALT, BY END USE 1/

(Metric tons, contained cobalt)

End use	1996			1997	
	January- September	January- December 2/	Year 3/	September	January- September
Steel:					
Stainless and heat resisting	29	38	38	3	28
Tool	74	95	95	6	79
Superalloys	2,070	2,910	3,220	277	2,590
Alloys (excludes steels and superalloys):					
Magnetic alloys	514 r/	682	728	59	517
Welding materials (structural and hard-facing) 4/	200 r/	268	284	27	240
Other alloys 5/	34 r/	45	65	W	W
Cemented carbides 6/	548 r/	721	722	85	555
Chemical and ceramic uses:					
Catalysts	482 r/	638	652	49	453
Driers in paints or related usage	558 r/	733	733	61	527
Ground coat frit	122 r/	159	159	13	123
Pigments	W	W	191	W	W
Miscellaneous and unspecified 7/	160 r/	211	119	17	197
Total	4,790 r/	6,500	7,010	599	5,310

r/ Revised. W Withheld to avoid disclosing company proprietary data; included with "Miscellaneous and unspecified."

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Data based on monthly reports.

3/ Includes annual reports.

4/ Includes wear-resistant alloys.

5/ Includes nonferrous alloys.

6/ Includes diamond bit matrices, cemented and sintered carbides, and cast carbide dies or parts.

7/ Includes feed or nutritive additive, full-alloy steel, glass decolorizer, mill products made from metal powder, and data indicated by the symbol "W."

TABLE 3
U.S. REPORTED STOCKS OF COBALT MATERIALS 1/

(Metric tons, contained cobalt)

Period	Industry 2/			Total	U. S. Government, 3/ metal
	Metal 4/	Oxide and other chemical compounds 5/	Scrap		
1996:					
September	333	326	116	774	19,000
October	288	275	111	675	18,900
November	292	280	114	685	18,800
December 6/	284	272	181	737	18,700
Yearend 7/	305	275	182	762	18,700
1997:					
January	337	281	101	719	18,500
February	303	269	92	665	18,400
March	325	251	118	694	18,300
April	370	252	88	710	17,900
May	382	239	81	702	17,800
June	365	241	81	688	17,800
July	389 r/	240	90	719 r/	17,800
August	323 r/	240	89	652 r/	17,600
September	341	240	89	671	17,500

r/ Revised.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Stocks reported by cobalt processors and consumers.

3/ Data from Defense Logistics Agency. Includes material committed for sale pending shipment.

4/ Includes metal powder.

5/ Data may include other cobalt materials.

6/ Data based on monthly reports.

7/ Includes annual reports.

TABLE 4
U.S. IMPORTS FOR CONSUMPTION OF COBALT, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Metals 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
August	480,000	\$24,800,000	51,900	\$2,010,000	38,600	\$405,000	528,000	4,730,000
September	434,000	20,600,000	58,600	2,440,000	101,000	954,000	503,000	5,240,000
October	347,000	17,100,000	71,000	3,030,000	101,000	1,010,000	425,000	5,660,000
November	481,000	22,300,000	61,100	2,640,000	90,700	911,000	550,000	6,210,000
December	400,000	19,400,000	64,100	2,400,000	155,000	1,340,000	494,000	6,710,000
January-December	5,760,000	327,000,000	824,000	36,200,000	1,260,000	14,800,000	6,710,000	XX
1997:								
January	629,000 7/	28,400,000 7/	85,900	3,080,000	182,000 7/	1,470,000 7/	746,000	746,000
February	567,000	24,300,000	56,900 7/	1,690,000 7/	157,000	1,540,000	649,000	1,400,000
March	524,000 7/	22,800,000 7/	72,200	3,250,000	65,000 7/	519,000 7/	594,000	1,990,000
April	770,000	32,900,000	104,000	4,190,000	203,000	1,910,000	899,000	2,890,000
May	634,000	31,100,000	63,200 7/	2,100,000 7/	250,000	2,270,000	746,000	3,640,000
June	584,000 7/	28,800,000 7/	124,000	4,760,000	139,000	1,470,000	711,000	4,350,000
July	547,000 7/	26,000,000 7/	120,000	4,760,000	265,000	2,680,000	704,000	5,050,000
August:								
Australia	--	--	5,000	116,000	--	--	3,600	3,600
Belgium	177	8,750	27,000	1,040,000	--	--	19,600	241,000
Brazil	15,200	682,000	--	--	2,080	26,100	15,700	105,000
Canada	7,250	426,000	--	--	2,670	67,400	8,480	629,000
China	--	--	--	--	--	--	--	55
Finland	50,600	2,310,000	65,200	2,190,000	114,000	1,100,000	128,000	1,090,000
France	742	58,800	680	42,900	--	--	1,230	57,800
Germany	5,800	373,000	--	--	--	--	5,800	56,300
India	--	--	--	--	--	--	--	4
Japan	4	6,300	--	--	100	2,620	28	22,900
Mexico	--	--	--	--	--	--	--	1,680
Morocco	--	--	--	--	--	--	--	11,700
Netherlands	--	--	--	--	--	--	--	8,640
Norway	150,000	7,140,000	--	--	--	--	150,000	1,400,000
Russia	121,000	5,020,000	1,770	63,900	--	--	122,000	647,000
South Africa	--	--	--	--	--	--	--	25,700
Spain	881	52,200	--	--	--	--	881	16,500
United Kingdom	14,400	854,000	39,600	1,440,000	9,090	135,000	45,100	191,000
Zaire	11,500	498,000	--	--	--	--	11,500	354,000
Zambia	130,000	5,940,000	--	--	--	--	130,000	829,000
Total	508,000	23,400,000	139,000	4,890,000	128,000	1,330,000	643,000	5,690,000

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ Unwrought cobalt, excluding alloys; includes cobalt cathode and cobalt metal powder.

3/ Includes cobalt sulfates, cobalt chlorides, cobalt carbonates, and cobalt acetates.

4/ Customs value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 5
U.S. IMPORTS FOR CONSUMPTION OF ADDITIONAL COBALT MATERIALS, BY COUNTRY 1/

(Kilograms, gross weight of material, except as noted)

Period and country of origin	Unwrought cobalt alloys		Other cobalt: matte, waste and scrap 2/		Wrought cobalt and cobalt articles	
	Quantity	Value 3/	Quantity	Value 3/	Quantity	Value 3/
1996:						
August	8,080	\$313,000	84,600	\$2,020,000	10,500	\$676,000
September	2,500	237,000	14,900	765,000	12,500	878,000
October	483	34,100	47,900	644,000	17,500	1,020,000
November	17,500	946,000	20,400	552,000	9,680	714,000
December	3,560	207,000	55,300	2,270,000	15,300	1,100,000
January-December	60,500	3,790,000	566,000	11,700,000	178,000	11,500,000
1997:						
January	5,920	443,000	32,800 4/	1,070,000 4/	14,500	876,000
February	12,400	497,000	38,100 4/	1,280,000 4/	14,100	958,000
March	2,350	181,000	29,500 4/	1,170,000 4/	39,100	1,380,000
April	8,450	418,000	73,400	1,950,000	24,800	1,530,000
May	24,400	955,000	50,700 4/	1,320,000 4/	29,300	1,470,000
June	2,230	128,000	56,200 4/	1,840,000 4/	14,900	997,000
July	15,100	500,000	43,100 4/	1,260,000 4/	15,600	956,000
August:						
Australia	34	1,610	--	--	--	--
Belgium	43	2,650	8,980 4/	696,000 4/	1	4,600
Canada	--	--	1,900 4/	105,000 4/	724	126,000
Denmark	17	1,870	--	--	--	--
Finland	--	--	38,700 4/	2,360,000 4/	--	--
France	--	--	6,650	101,000	715	44,400
Germany	228	18,500	522	6,360	7,820	343,000
Japan	750	67,800	1,100	53,500	6,730	406,000
Morocco	--	--	3,600 4/	151,000 4/	--	--
Sweden	466	22,200	4,510	149,000	--	--
United Kingdom	--	--	11,400 4/	237,000 4/	5,540	324,000
Zaire	5,000 4/	179,000 4/	--	--	--	--
Total	6,540	293,000	77,400	3,860,000	21,500	1,250,000

1/ Data are rounded to three significant digits; may not add to totals shown.
from which cobalt-containing chemical compounds are manufactured.

3/ Customs value.

4/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 6
U.S. EXPORTS OF COBALT MATERIALS 1/

(Kilograms, gross weight of material, except as noted)

Period	Unwrought cobalt, powders, matte, waste and scrap 2/		Oxides and hydroxides		Salts and compounds 3/		Total cobalt content for the month 5/	Cobalt content, year to date 5/ 6/
	Quantity	Value 4/	Quantity	Value 4/	Quantity	Value 4/		
1996:								
August	88,700	\$3,160,000	7,970	\$277,000	26,600	\$292,000	101,000	1,170,000
September	58,200	2,370,000	35,600	1,060,000	42,800	224,000	94,200	1,270,000
October	73,100	3,390,000	25,700	790,000	31,900	104,000	99,300	1,370,000
November	84,000	3,510,000	27,400	777,000	78,100	316,000	122,000	1,490,000
December	118,000	3,930,000	54,400	1,440,000	112,000	678,000	184,000	1,670,000
January-December	1,320,000	66,100,000	346,000	10,200,000	446,000	4,050,000	1,670,000	XX
1997:								
January	60,800	2,350,000	30,300	979,000	34,100 7/	149,000 7/	90,700	90,700
February	101,000	2,480,000	48,100 7/	1,160,000 7/	65,500 7/	234,000 7/	152,000	242,000
March	82,000	3,990,000	50,100	1,530,000	18,500	253,000	123,000	365,000
April	143,000	5,760,000	93,100 7/	2,140,000 7/	5,430	74,100	211,000	576,000
May	77,100	3,990,000	35,600 7/	802,000 7/	65,800	428,000	118,000	695,000
June	82,900	3,760,000	56,200 7/	1,660,000 7/	75,000 7/	246,000 7/	141,000	836,000
July	55,200	2,710,000	68,000 7/	1,610,000 7/	102,000 7/	520,000 7/	129,000	965,000
August	81,600	3,290,000	32,600 7/	595,000 7/	94,200	442,000	128,000	1,090,000

XX Not applicable.

1/ Data are rounded to three significant digits; may not add to totals shown.

2/ May include other intermediate products of cobalt metallurgy, and unwrought cobalt alloys.

3/ Cobalt acetates and cobalt chlorides.

4/ Free alongside ship (f.a.s.) value.

5/ Estimated from gross weights.

6/ Year to date may include revisions to prior months.

7/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.

TABLE 7
U.S. EXPORTS OF WROUGHT COBALT, COBALT ORE, AND CONCENTRATES 1/

(Kilograms, gross weight of material, except as noted)

Period	Wrought cobalt and cobalt articles		Cobalt ore and concentrates	
	Quantity	Value 2/	Quantity	Value 2/
1996:				
August	67,100	\$1,660,000	43,500	\$1,050,000
September	31,000	1,780,000	56,200	2,250,000
October	20,600	1,420,000	--	--
November	108,000	2,610,000	8,790	370,000
December	88,900	4,080,000	--	--
January-December	532,000	23,600,000	154,000	4,560,000
1997:				
January	44,300	3,020,000	24,600 3/	1,000,000 3/
February	20,900	1,420,000	80,500 3/	750,000 3/
March	68,200	3,720,000	12,200 3/	145,000 3/
April	66,100	2,590,000	300 3/	7,390 3/
May	187,000	8,410,000	2,510 3/	56,500 3/
June	76,800	2,780,000	9,400 3/	651,000 3/
July	29,300	1,230,000	20,300 3/	716,000 3/
August	36,400	2,700,000	285 3/	33,500 3/

1/ Data are rounded to three significant digits.

2/ Free alongside ship (f.a.s.) value.

3/ All or part of these data have been referred to the Bureau of the Census for verification.

Source: Bureau of the Census.